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13/Response
J. Steplos
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RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2855

PATENT
Attorney Docket No. 400388/TSI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

HAMADA et al.

Application No. 09/425,630

Art Unit: 2855

Filed: October 22, 1999

Examiner: C. Dickens

For: FLOW RATE MEASURING
DEVICE

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TC 2800 MAIL ROOM

RESPONSE TO OFFICE ACTION

Commissioner for Patents
Box AF
Washington, D.C. 20231

Dear Sir:

In response to the Official Action dated February 12, 2002, Applicants request reconsideration in view of the following remarks. Claims 1-4 and 6-16 are pending in this patent application.

The claims all pertain to a flow rate measuring device and there are three independent claims, claims 1, 15, and 16. All three independent claims were amended in the previous Amendment to include, among other features, a description that originally appeared in claim 5, namely, that the generally smooth, converging inner wall surfaces of the measuring duct include respective inflection points.

The term "inflection point" is well understood in mathematics, specifically calculus, as the point on a curve where the rate of change of the slope of the curve becomes zero. Stated another way, the second derivative of the curve is zero. The term is well understood by engineers who have been educated in calculus. The term even finds its way into ordinary dictionaries where it is less precisely defined as "a point on a curve that separates an arc

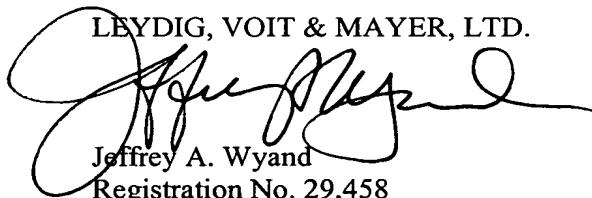
concave upward from one concave downward and vice versa" and "a change in curvature with respect to a fixed line from concave to convex or conversely; the point where such a change takes place". In the present invention, the term "inflection point" is properly used and identified in the disclosure and in the claims. For example, in the embodiment shown in Figure 6(b), the inflection points in the respective profiles of the first pair of generally smooth, converging inner wall surfaces are identified by the reference numbers 40 and 50.

The rejection made in the first Official Action was repeated in the second Official Action notwithstanding the incorporation into each of the independent claims of the description of the first pair of generally smooth, converging inner wall surfaces including the inflection points. All examined claims have again been rejected as anticipated by the prior art structures illustrated in Figures 39-45 of the patent application. Those figures have again been carefully reviewed in response to the Official Action. Those figures illustrate various flow rate measuring devices, all of which have inlets, some with flared or enlarged openings admitting the fluid and a smaller cross-sectional area as the fluid moves through the measuring duct. However, none of those flow rate measuring ducts includes a measuring duct with even one surface, much less a pair of converging smooth surfaces, that includes, in profile, i.e., in cross-section, an inflection point. Since anticipation requires that a reference relied upon in a claim rejection disclose every element of the claimed invention and at least the element concerning the inflection point is missing from the source of prior art relied upon, it is apparent that the rejection is fatally defective and cannot be properly maintained.

Reconsideration and withdrawal of the rejection and allowance of all of claims 1-4 and 6-16 are earnestly solicited.

Respectfully submitted,

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